

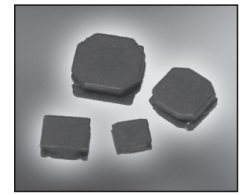
NPIM-LP Series

Shielded Surface Mount Inductor



FEATURES

- SHIELDED POWER INDUCTOR
- AUTOMATIC ASSEMBLY
- ROBUST CONSTRUCTION
- HIGH EFFICIENCY
- HIGH CURRENT RATINGS
- ULTRA LOW PROFILE (1.0 ~ 1.2mm HEIGHTS)
- SURFACE MOUNTABLE CONSTRUCTION
- TAPED AND REELED FOR AUTOMATIC INSERTION

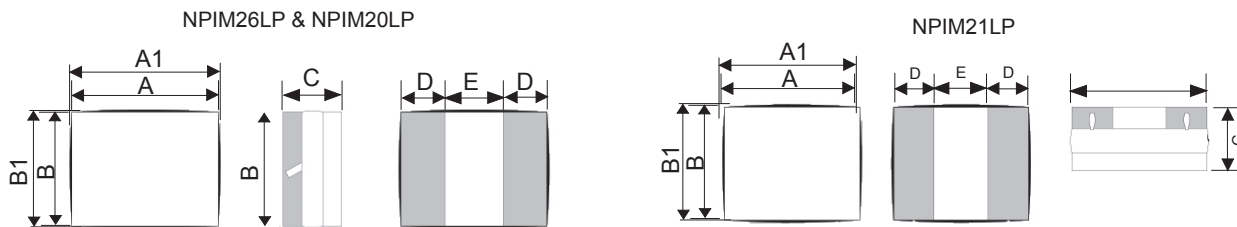


CHARACTERISTICS

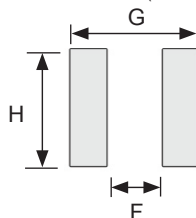
Case Size	NPIM26LP	NPIM20LP	NPIM21LP
Inductance Range	0.24 ~ 4.7 μ H	0.24 ~ 4.7 μ H	0.24 ~ 10 μ H
Ambient Operating Temperature Range	-55°C ~ +125°C (including self-heating)		
Temperature Rise at Irms	Maximum +40°C Temperature Rise		
Inductance Change at Isat	Maximum -30% Inductance Drop From Initial Measured Value		
Inductance Tolerance	\pm 20% (M)		
Resistance to Solder Heat	+260°C for 10 seconds		

DIMENSIONS (mm)

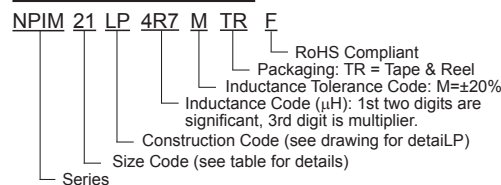
Series	Component Dimensions							Land Pattern Dimensions		
	A	A1	B	B1	C	D	E	F	G	H
NPIM26LP	2.0 -0.1/+0.2	2.3 max.	1.6 -0.1/+0.2	1.9 max.	1.0 max.	0.50 ref.	1.0 ref.	0.8	2.3	1.9
NPIM20LP	2.5 -0.1/+0.2	2.8 max.	2.0 -0.1/+0.2	2.3 max.	1.0 max.	0.75 ref.	1.0 ref.	1.0	2.9	2.4
NPIM21LP	2.5 \pm 0.20	2.8 max.	2.0 \pm 0.20	2.3 max.	1.10 \pm 0.10	0.80 \pm 0.20	0.95 \pm 0.20	1.0	2.9	2.4



REFLOW SOLDERING
LAND PATTERN (All Sizes)



PART NUMBER SYSTEM



NPIM-LP Series

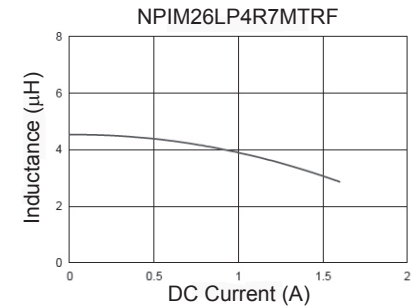
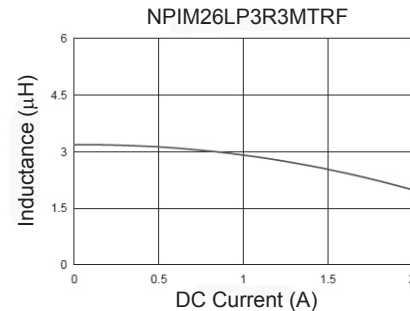
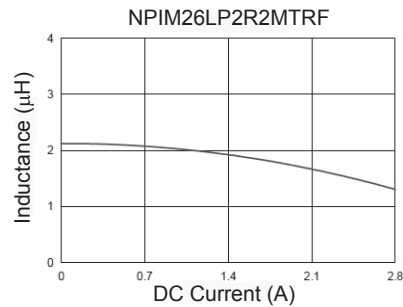
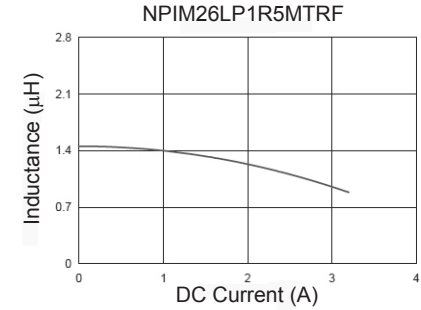
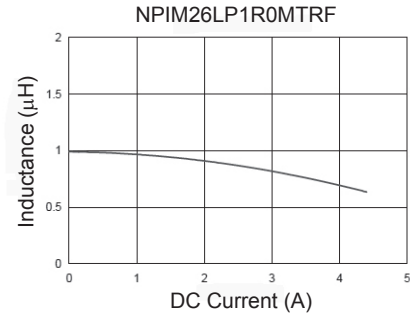
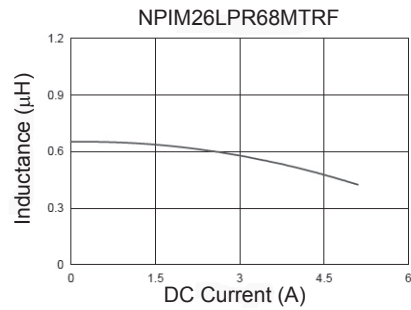
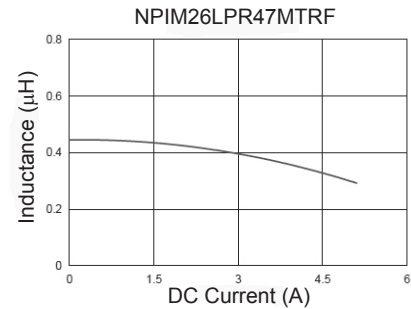
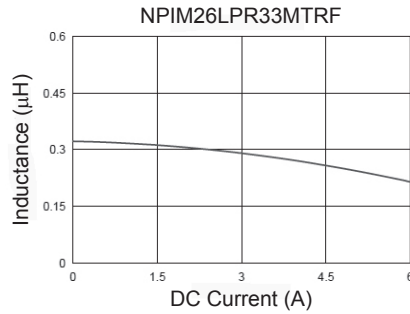
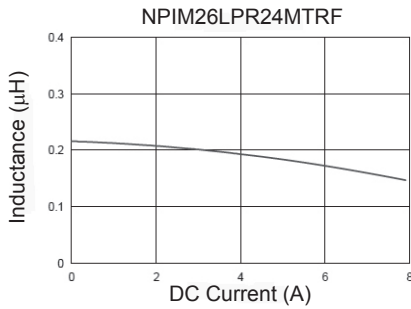
Shielded Surface Mount Inductor



NPIM26LP Size

Series	Standard Values - Case Size 26 (2.0×1.6×1.0mm)							
	Inductance (μH)	Test Conditions	DCR (Ω)		Isat* (Amps)		IDC* (Amps)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
NPIM26LPR24MTRF	0.24 ± 20%	1MHz, 1V	0.015	0.020	7.5	6.5	6.50	5.50
NPIM26LPR33MTRF	0.33 ± 20%		0.018	0.023	5.5	5.0	5.60	5.20
NPIM26LPR47MTRF	0.47 ± 20%		0.024	0.029	5.2	4.5	5.30	4.70
NPIM26LPR68MTRF	0.68 ± 20%		0.036	0.044	5.1	4.4	4.20	3.80
NPIM26LP1R0MTRF	1.0 ± 20%		0.050	0.060	4.5	4.0	3.40	3.10
NPIM26LP1R5MTRF	1.5 ± 20%		0.068	0.082	3.2	2.8	3.10	2.70
NPIM26LP2R2MTRF	2.2 ± 20%		0.10	0.120	2.7	2.4	2.30	2.10
NPIM26LP3R3MTRF	3.3 ± 20%		0.16	0.192	2.0	1.7	2.00	1.80
NPIM26LP4R7MTRF	4.7 ± 20%		0.18	0.216	1.6	1.4	1.80	1.60

*Maximum +40°C temperature rise at IDC. Maximum -30% inductance drop from initial measured value at Isat. See page 5 for Isat/Irms Test Conditions.



Performance Passives By Design

NPIM-LP Series

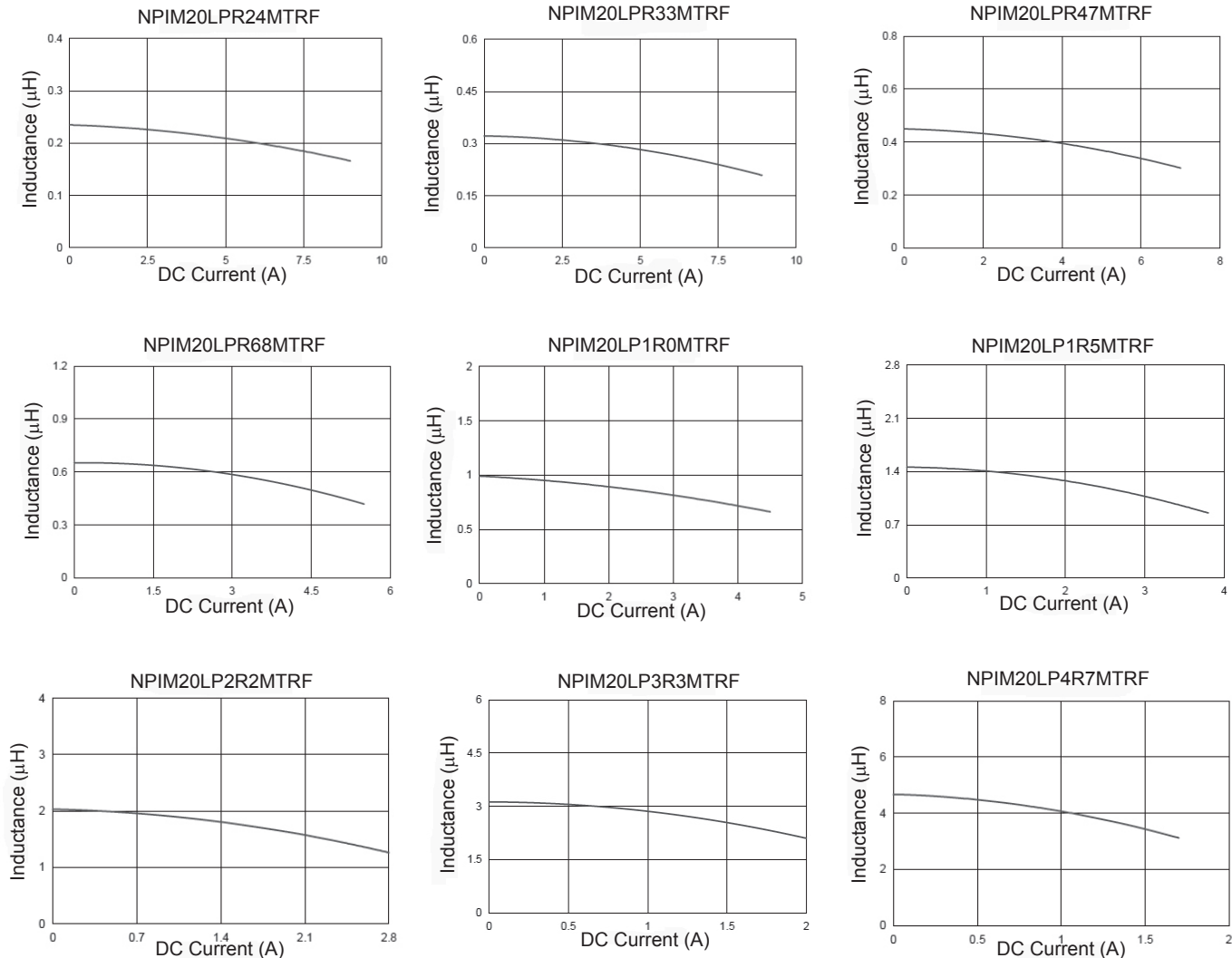
Shielded Surface Mount Inductor



NPIM20LP Size

Series	Standard Values - Case Size 20 (2.5×2.0×1.0mm)							
	Inductance (μH)	Test Conditions	DCR (Ω)		Isat* (Amps)		IDC* (Amps)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
NPIM20LPR24MTRF	0.24 ± 20%	1MHz, 1V	0.018	0.022	9.5	8.0	6.00	5.50
NPIM20LPR33MTRF	0.33 ± 20%		0.023	0.028	8.0	6.5	5.60	5.10
NPIM20LPR47MTRF	0.47 ± 20%		0.027	0.035	7.0	5.9	5.30	4.80
NPIM20LPR68MTRF	0.68 ± 20%		0.032	0.040	5.5	4.6	4.40	4.00
NPIM20LP1R0MTRF	1.0 ± 20%		0.044	0.053	4.9	4.3	3.70	3.40
NPIM20LP1R5MTRF	1.5 ± 20%		0.062	0.074	3.8	3.1	3.40	3.00
NPIM20LP2R2MTRF	2.2 ± 20%		0.078	0.093	2.8	2.3	2.80	2.50
NPIM20LP3R3MTRF	3.3 ± 20%		0.125	0.150	2.1	1.8	2.20	2.00
NPIM20LP4R7MTRF	4.7 ± 20%		0.180	0.216	1.7	1.4	1.80	1.60

*Maximum +40°C temperature rise at IDC. Maximum -30% inductance drop from initial measured value at Isat. See page 5 for Isat/Irms Test Conditions.

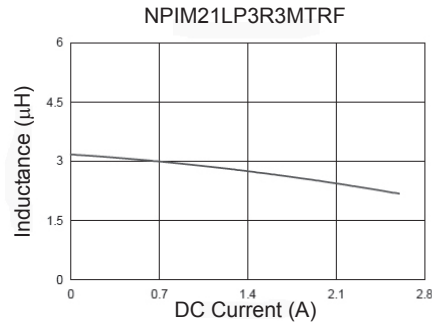
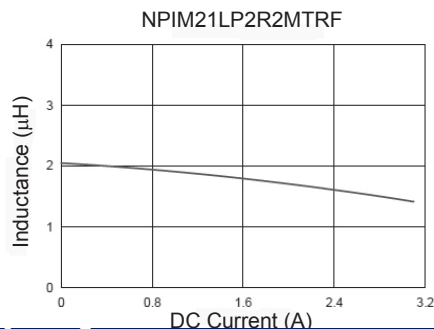
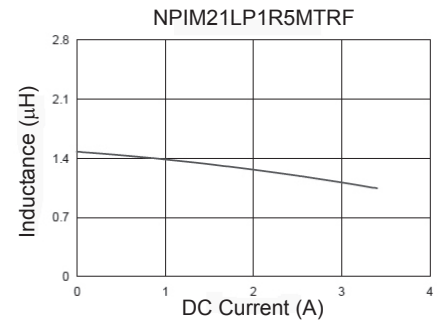
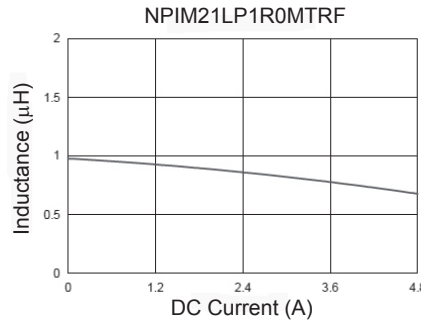
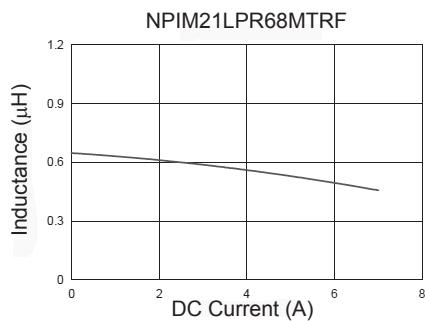
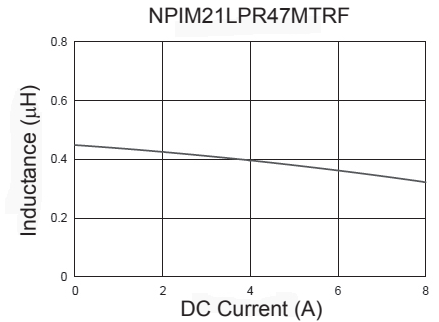
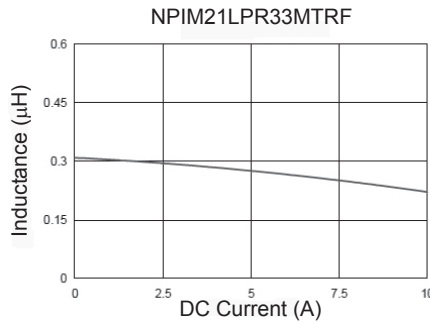
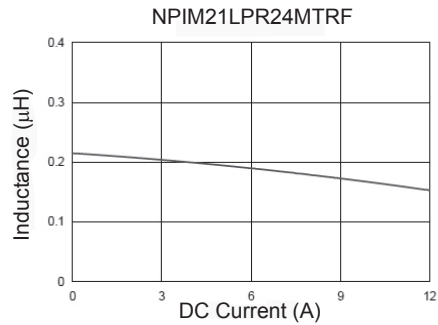




NPIM21LP Size

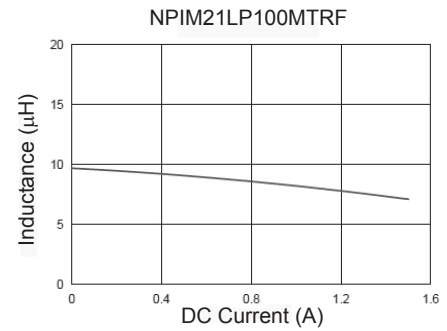
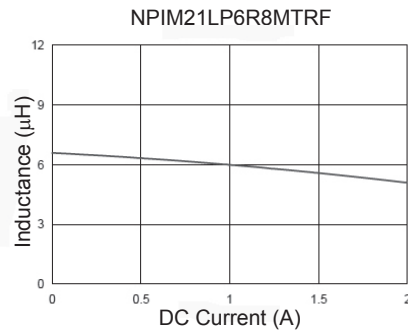
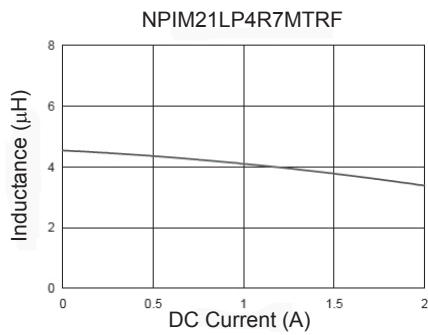
Series	Standard Values - Case Size 21 (2.5×2.0×1.2mm)							
	Inductance (μH)	Test Conditions	DCR (Ω)		Isat* (Amps)		IDC* (Amps)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
NPIM21LPR24MTRF	0.24 ± 20%	1MHz, 1V	0.018	0.022	8.0	7.0	6.00	5.50
NPIM21LPR33MTRF	0.33 ± 20%		0.023	0.028	7.0	6.0	5.60	5.10
NPIM21LPR47MTRF	0.47 ± 20%		0.027	0.035	6.0	5.0	5.30	4.80
NPIM21LPR68MTRF	0.68 ± 20%		0.036	0.045	5.0	4.5	4.50	4.00
NPIM21LP1R0MTRF	1.0 ± 20%		0.045	0.058	4.3	3.8	3.80	3.50
NPIM21LP1R5MTRF	1.5 ± 20%		0.060	0.072	3.5	3.0	3.50	3.10
NPIM21LP2R2MTRF	2.2 ± 20%		0.090	0.108	3.1	2.6	2.80	2.50
NPIM21LP3R3MTRF	3.3 ± 20%		0.125	0.150	2.2	1.9	2.50	2.20
NPIM21LP4R7MTRF	4.7 ± 20%		0.190	0.220	2.0	1.7	1.90	1.60
NPIM21LP6R8MTRF	6.8 ± 20%		0.300	0.360	1.8	1.5	1.30	1.10
NPIM21LP100MTRF	10 ± 20%		0.420	0.475	1.4	1.1	1.10	1.00

*Maximum +40°C temperature rise at IDC. Maximum -30% inductance drop from initial measured value at Isat. See page 5 for Isat/Irms Test Conditions.



NPIM-LP Series

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Irms Test Conditions (Board Measurement Data)

Material: FR4

Board dimensions : 100 X 50 X 1.6t mm

Pattern dimensions: 45 X 45 mm (Double side board)

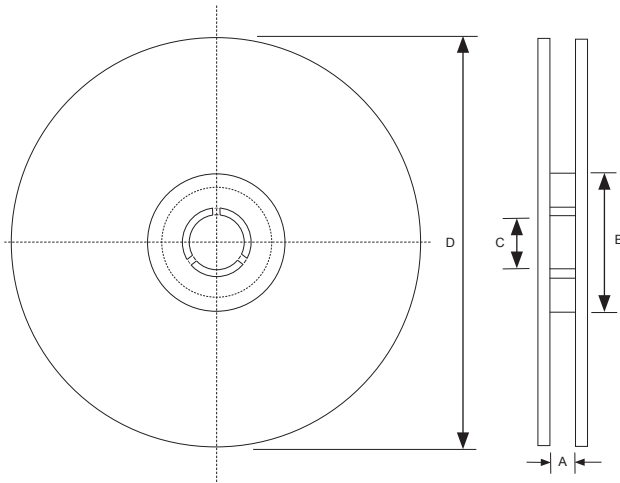
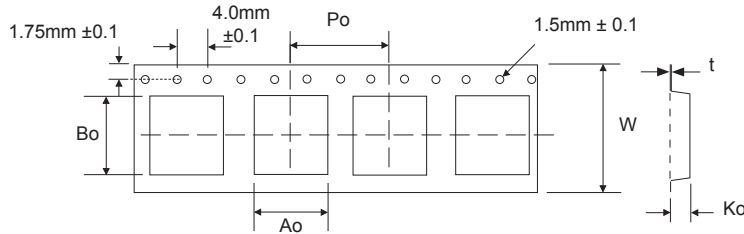
Pattern thickness : 70 μm

NPIM-LP Series

Shielded Surface Mount Inductor



Case Size	CARRIER TAPING DIMENSIONS (mm) AND REEL QUANTITY						Quantity
	Ao	Bo	Ko	W	Po	t	
NPIM26LP	2.00 ± 0.1	2.50 ± 0.1	1.4 ± 0.1	8.0 ± 0.1	4.0 ± 0.1	0.23 ± 0.05	2,000
NPIM20LP	2.45 ± 0.1	2.85 ± 0.1	1.4 ± 0.1	8.0 ± 0.1	4.0 ± 0.1	0.23 ± 0.05	2,000
NPIM21LP							



Tape Width	REEL DIMENSIONS (mm)			
	A(mm)	B(mm)	C(mm)	D(mm)
NPIM26LP	8.4 ± 1.0	50 min.	13.0 ± 0.8	178 ± 2.0
NPIM20LP				
NPIM21LP				

REFLOW SOLDERING PROFILE

